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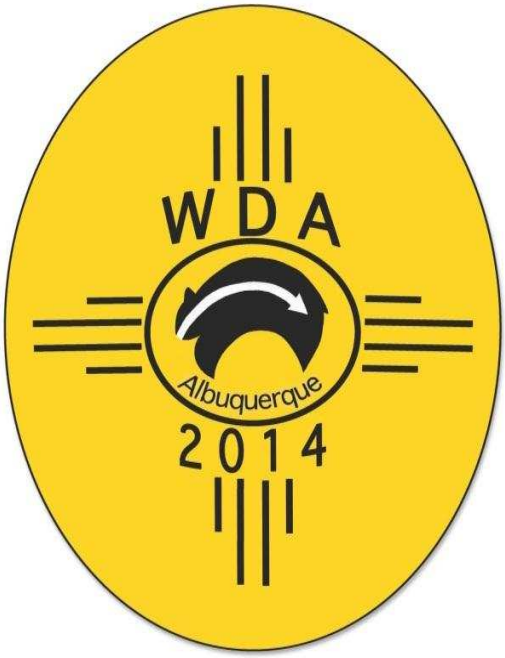
One Health:
Transitioning from Theory to Practice



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Program & Abstracts

UNDERSTANDING THE IMPACT ON HUMAN AND WILDLIFE HEALTH OF THE INVASIVE ALIEN MOSQUITO SPECIES *AEDES ALBOPICTUS* IN NORTHERN ITALY

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Aedes albopictus is among the most widespread alien species in the world and its introduction and spread in northern Italy has been documented since 1990. While its impact on human health is well known in this area not only for its nuisance but also for being the most important vector involved in the 2007 epidemics of Chikungunya (CHIKV), its role as a bridge vector of infections impacting both human health and wildlife is less understood. In fact, extensive epidemics of West Nile virus (WNV) and Usutu Virus (USUV) have been recently documented within the study area. Although referred to as an anthropophilic species, there is evidence of its relative ornithophily. To better understand its role as bridge vector for human and wildlife diseases in Italy, we carried out mosquito samplings within two regions (Trentino and Veneto) from 2011 to 2013. A total of 4613 unfed female and 1976 males were screened for *Flaviviruses*, while 86 fed females were screened to identify the host used by the mosquito for its blood meal. The virological screening identified the occurrence of *Aedes flavivirus* (AeFV) in a significant number of pools tested (14.6% in Trentino and 19.3% in Veneto) while no positive samples were obtained for West Nile virus or Usutu virus. Blood meal analysis of the engorged females identified the following host species: *Homo sapiens* (88.3%), *Erinaceus europaeus* (2.3%), *Coturnix japonica* (1.2%), *Passer montanus* (1.2%) and *Turdus merula* (1.2%). These preliminary finding indicate the ability of this species to feed also on non-human hosts and thus act as an additional potential bridge vector of pathogens among wildlife and humans, although in this study we could not identify West Nile or Usutu virus in our samples.